

**REMARKS**

Claims 1-23 are pending in the application with Claims 1, 11 and 21-23 being the independent claims.

The Advisory Action states that a rejection under 35 U.S.C. § 112, first paragraph remains unaddressed. In particular, the Advisory Action recites the amended limitation of "...modeling being [done] in a manner uninfluenced by a prior existing related system architecture and measured performance thereof".

Applicant effectively removed this claim limitation from the claims in part in an Amendment filed on April 12, 2006 and fully in the September 28, 2006 Amendment after Final Rejection. The claim amendments entered to date (through and including those addressed by the Advisory Action of October 25, 2006) have no claims reciting the rejected claim language. Thus the written description requirement of the claims as they now stand is met where the rejected claim terms are no longer present in the claims.

Accordingly, the rejection and 35 U.S.C. § 112 first paragraph is believed to be unwarranted and withdrawal of this rejection is respectfully requested.

Claims 1-5 and 21-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over "EUROEXPERT - Best Practices: French Social Security" UNEDIC dated 1992 in view of the IEEE article -- "An Introduction to Six Sigma With Design Example" by Robert White dated 1992. Further Claims 6-20 have been rejected under 35 U.S.C. § 103 as being unpatentable over the EUROEXPERT article in view of the Six Sigma article by White (1992) further in view of U.S. Patent No. 6,532,465 to Hartley et al.

The present invention as now claimed designs and constructs an information system architecture based on a working model of the proposed information system architecture. The working model is a mathematical model having a business layer, an application layer and a technology layer. Performance metrics of each layer of the model are modeled and compared with business requirements defined for business processes of interest. The proposed information system architecture is constructed and includes application components, a technology bus and an application bus. During this construction, each business process is mapped to an application component. The application component is modeled by a corresponding application component model in the application layer of the working mathematical model. The technology bus of the

constructed proposed information system architecture serves as an abstract interface for data access or technology services between the components modeled in the application and technology layers of the working mathematical model. The application bus of the constructed proposed information system architecture provides a communication, distribution and management interface between application component models in the application layer of the mathematical model.

The working mathematical model not only predicts (models) performance of the constructed proposed information system architecture but also predicts application component behavior (component level performance) in the constructed proposed information system architecture. This modeling of performance metrics occurs during the design and construction phase of the proposed information system architecture. That is, the mathematical model governs the constructing of the application components, technology bus and application bus in the proposed information system architecture.

None of the cited art provides a constructed proposed information system architecture that includes two buses (a technology bus and an application bus) that provide abstract interfacing and separate management interfacing, respectively, as now claimed by the present invention. Further, none of the cited art provides a working multi-layer mathematical model that governs the design and construction of such an information system architecture as now claimed in base Claims 1, 11 and 21-23 and supported by original disclosure Specification pages 4, lines 3-16; page 7, lines 18-28; page 10, lines 4-26, Figs. 1 and 2A, 2B.

The patentably distinguishing claim language supporting the foregoing reads (in pertinent part)

"...using a multi-layer mathematical model of a proposed information system architecture supporting the business process design, constructing the proposed information system architecture, the multi-layer mathematical model being implemented on a computer and the layers of the multi-layer model comprising a business layer, an application layer, and a technology layer, the business layer, application layer and technology layer having different data than each other, said constructing comprising mapping each business process to an application component which is modeled by a corresponding application

component model in the application layer, each application component model linked to one or more component models in the application and technology layers, which support the corresponding application component,

wherein the constructed proposed information system architecture comprises a technology bus, the technology bus serving as an abstract interface for data access or technology services between the components modeled in the application and technology layers and wherein the constructed proposed information system architecture further comprises an application bus, the application bus providing a communication, distribution, and management interface between application component models in the application layer;..." and

"...during the constructing, modeling performance metrics for each layer of the multi-layer model...determining modifications to the proposed information system architecture as being constructed, resulting in an information system architecture design, a description of the resulting information system architecture design being output."

See base Claims 1, 11 and 21-23. The respective dependent claims inherit these claim limitations.

On page 11 of the the last Office Action (dated July 28, 2006), the EUROEXPERT reference is stated as failing to teach "...specifically modeling the performance [metrics] for each layer, simulating, comparing them to the requirements, acceptability, proposing & modifying the [metrics] at appropriate layers." The Six Sigma article by White is set forth as disclosing "...how Six-Sigma methodology can be used to perfect any process, system or component..."

However, neither EUROEXPERT nor White discloses the two bus constructed proposed information system architecture, i.e., a technology bus and an application bus that provide abstract interfacing and separate management interfacing, respectively, as now claimed in base Claims 1, 11 and 21-23. No such structure is disclosed in EUROEXPERT or in White. The White reference merely discloses a process and no tool or structure. Claims 2-5 depend from Claim 1 and include the foregoing patentably distinguishing claim limitations of this base claim.

For the foregoing reasons the § 103 rejection of Claims 1-5 and 21-23 is believed to be overcome and that rejection should be withdrawn.

With regard to the § 103 rejection of Claims 6-20, the arguments over EUROEXPERT and the Six Sigma article by White from above also apply here.

Hartley discloses a multi-tier structure that provides the functionality to perform more application specific processes at tiers closest to the users while increasingly abstract functions are performed at a central location near the base. Located at the base may be a central server which includes a database. The base server may be connected to at least one application server located at an intermediate tier. The application server may perform functions relevant to the location it is serving while the central server may provide services for all parts of the system. The uppermost tier may include client nodes which act as the interface between the system and the users. See col. 4, lines 55-67. In addition, Hartley discloses an object oriented system which employs various objects that process data at different levels of abstraction between the client node and the base tier. Presentation objects in the uppermost tier may correspond to one or more business objects that are highly specific to a client's implementation. These objects may be focused toward supporting user interfaces, report writers, etc. Mapping between the presentation objects and the business objects located on an intermediate tier may be provided. The business objects may contain key abstracted business logic supported by the particular implementation of the system. Contained within these objects may be the metadata and rules necessary to drive the processing engines. See col. 5, lines 12-25.

Thus the July 28, 2006 Office Action on the bottom of page 16 to the top of page 17 alleges "...it would have been obvious to one (e.g. a designer) of ordinary skill in the art...to use the layering approach, communication strategy and real-time/batch processing taught by Hartley and apply them to White/EUROEXPERT references. The motivation would be a design, which is abstract enough [that] can handle new business requirements without significantly changing the underlying architecture, and specific enough that the business layer can provide rule based processing by passing in metadata..."

What the combination of these references misses is the use of the modeled performance metrics during the construction of the proposed information system architecture, so that modifications to the proposed information system architecture as being constructed are determined as in the claimed invention. The patentably distinguishing claim language reads in pertinent part "...during the constructing, modeling performance metrics for each layer of the


multi-layer model including continuous service of the proposed information system architecture...; and determining modifications to the proposed information system architecture as being constructed, resulting in an information system architecture design..." See base Claims 1, 11 and 21-23 as now amended. Dependent Claims 6-8 and 16-18 are now cancelled. Dependent Claims 9-10 inherit the patentable distinction of base Claim 1. Likewise, dependent Claims 12-15 and 19-20 inherit the foregoing distinction from base Claim 11. It is this use of modeling of performance metrics during the design and construction phase of a proposed information system architecture which is missing from EUROEXPERT, the Six Sigma article by White and the Hartley patent, individually or in any combination. Thus the § 103 rejection of Claims 6-20 is believed to be overcome and this rejection should be withdrawn.

### CONCLUSION

In view of the above amendments and remarks, it is believed that all pending claims (Claims 1-5, 9-15 and 19-23) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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Dated: 10/30/07